Reducing Stormwater Costs through Low Impact Development (LID)

Regional,
FEMA Region V

Kane County, IL - The Mill Creek subdivision in the town of Geneva, Kane County, Illinois is a 1,500-acre, mixed-use community built as a conservation-design development.

The subdivision was built using cluster development. It uses open swales for stormwater conveyance and treatment, and it has a lower percentage of impervious surface than conventional developments.

When compared with the conventional development, the conservation-site design techniques used at Mill Creek saved approximately $3,411 per lot. Nearly 70 percent of these savings resulted from reduced costs for stormwater management, and 28 percent of the savings were found in reduced costs for site preparation.

LID practices are intended to manage urban stormwater runoff at its source. The goal is to mimic the way water moved through an area before it was developed by using design techniques that infiltrate, evapotranspirate, and reuse runoff close to its source.

Some common LID practices include rain gardens, grassed swales, cisterns, rain barrels, permeable pavements, and green roofs. LID practices increasingly are used by communities across the country to help protect and restore water quality.

While the study focuses on the cost reductions and cost savings that are achievable through the use of LID practices, the EPA says communities can experience many amenities and associated economic benefits that go beyond cost savings.

This study does not monetize and consider these values in performing the cost calculations, but the EPA says these economic benefits are "real and significant."

For that reason, EPA has included a discussion of these economic benefits in the study document and has provided references for further exploration.

Note: This story is part of a case study that involved multiple regions.

Quick Facts

Sector:
Public

Cost:
Amount Not Available

Primary Activity/Project:
Flood Control

Primary Funding:
Other Federal Agencies (OFA)